NPort® 5400 Series

4-port RS-232/422/485 serial device servers

- 10/100M auto-sensing Ethernet
- 4 serial ports, with support for RS-232, RS-422, and RS-485
- Built-in 15 KV ESD surge protection for all serial signals
- Versatile socket operation modes, including TCP Server, TCP Client, and UDP
- Choice of configuration methods: Web console, Telnet console, and Windows utility
- SNMP MIB-II for network management
- 2 KV isolation protection for NPort® 5430I/5450I/5450I-T
- -40 to 75°C operating temperature (T model)

Network Readiness for up to Four Serial Devices

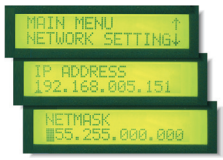
NPort® 5400 device servers can conveniently and transparently connect up to four serial devices to an Ethernet network, allowing you to network your existing serial devices with only basic configuration. Data transmission between the serial and Ethernet interfaces is bi-directional. By using NPort® device servers, you not only protect your current hardware investment, but also allow for future network expansion. You can both centralize the management of your serial devices, and distribute management hosts over the network.

Independent Operation Mode for Each Serial Port

NPort® 5400 device servers can be used to connect different devices for remote data polling or event handling over a TCP/IP network. Each serial port on the NPort® 5400 operates independently to provide maximum versatility. For example, port 1 can operate in Driver mode, port 2 in TCP Server mode, and ports 3 and 4 in TCP Client mode.

User-friendly LCD Panel for Easy Installation

An LCD panel is built into the NPort® 5400's top panel, with four buttons for inputting data, configuration, and selecting the operation mode. The LCD panel displays the server name, serial number, and IP address, and can be used to enter or modify parameters such as IP address, netmask, and gateway. (The LCD panel is not available on wide temperature models.)



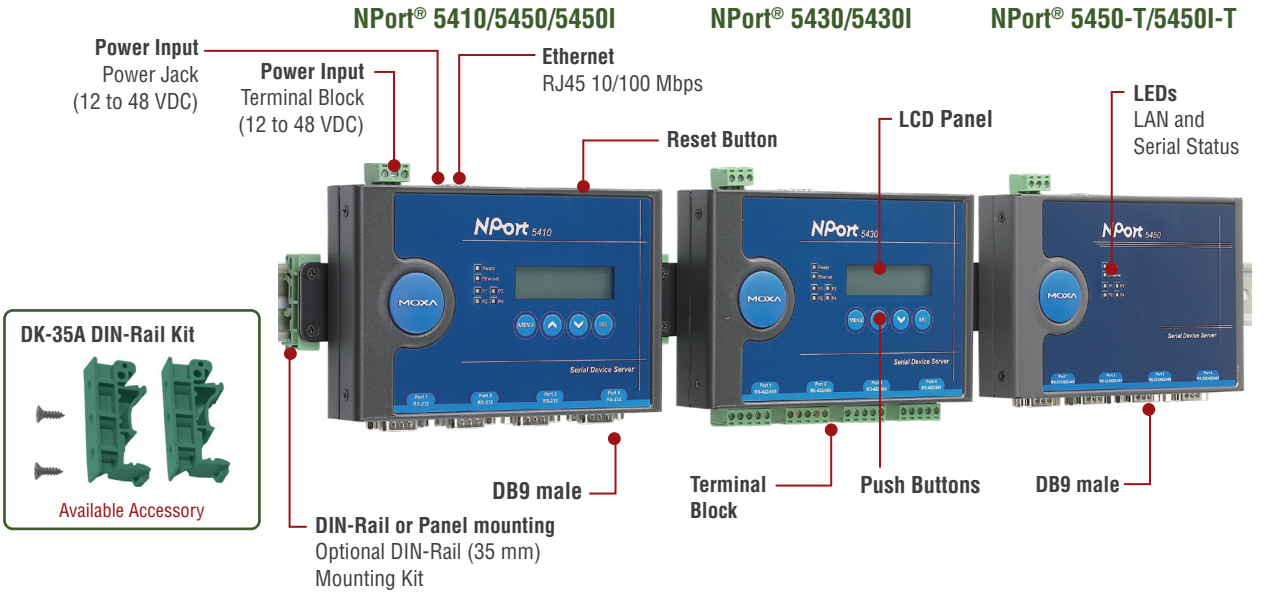
Dual DC Power Inputs

NPort® 5400 device servers support dual power sources by providing both a DC terminal block input and a DC power jack input. Providing two types of power input gives users greater flexibility for use with different applications.

Adjustable Termination and Pull High/Low Resistors

The NPort 5400 series provides adjustable termination and pull high/low resistors for RS-485 applications. In some critical environments, termination resistors may be needed to prevent the reflection of serial signals, and the pull high/low resistors may need adjusting to maintain the integrity of the electrical signal. Since no set of resistor values is universally compatible with all environments, the NPort® 5400 has four sets of DIP switches on the bottom panel to set the termination and pull high/low resistor values.

Appearance



Specifications

Ethernet Interface

Number of Ports: 1
Speed: 10/100 Mbps, auto MDI/MDIX
Connector: 8-pin RJ45
Magnetic Isolation Protection: 1.5 KV built-in

Serial Interface

Number of Ports: 4
Serial Standards:
NPort® 5410: RS-232
NPort® 5430/5430I: RS-422/485 (software selectable)
NPort® 5450/5450I/5450-T/5450I-T: RS-232/422/485 (software selectable)
Connector:
NPort® 5410/5450/5450I/5450-T/5450I-T: DB9 male
NPort® 5430/5430I: Terminal block
Serial Line Protection:
15 KV ESD protection for all signals
2 KV isolation protection (NPort® 5430I/5450I/5450I-T)
RS-485 Data Direction Control: ADDC® (automatic data direction control)
Pull High/Low Resistor for RS-485: 1 KΩ, 150 KΩ
Terminator for RS-485: 120 Ω

Serial Communication Parameters

Data Bits: 5, 6, 7, 8
Stop Bits: 1, 1.5, 2
Parity: None, Even, Odd, Space, Mark
Flow Control: RTS/CTS and DTR/DSR (RS-232 only), XON/XOFF
Baudrate: 50 bps to 921.6 Kbps

Serial Signals

RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422: Tx+, Tx-, Rx+, Rx-, GND
RS-485-4w: Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w: Data+, Data-, GND

Software

Network Protocols: ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP V1, HTTP, SMTP, SNTP, Rtelnet, ARP
Configuration Options: Web Console, Telnet Console, Windows Utility
Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7 x86/x64, Embedded CE 5.0/6.0, XP Embedded
Fixed TTY Drivers: SCO Unix, SCO OpenServer, UnixWare 7, UnixWare 2.1, SVR 4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i
Linux Real TTY Drivers: Linux kernel 2.4.x, 2.6.x

Mini Screen with Push Buttons (standard temp. models only)

LCD Panel: Liquid Crystal Display on the case
Push Buttons: Four push buttons for convenient on-site configuration

Physical Characteristics

Housing: Metal, IP30 protection
Weight: 740 g
Dimensions:
Without mounting kit: 158 x 103 x 33 mm (6.22 x 4.06 x 1.30 in)
With mounting kit: 176 x 103 x 33 mm (6.93 x 4.06 x 1.30 in)

Environmental Limits

Operating Temperature:
Standard Models: 0 to 55°C (32 to 131°F)
Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Operating Humidity: 5 to 95% RH
Storage Temperature: -40 to 75°C (-40 to 167°F)

Power Requirements

Input Voltage: 12 to 48 VDC
Power Consumption:
NPort® 5410: 350 mA @ 12 V, 190 mA @ 24 V
NPort® 5430: 320 mA @ 12 V, 175 mA @ 24 V
NPort® 5430I: 530 mA @ 12 V, 280 mA @ 24 V
NPort® 5450/5450-T: 350 mA @ 12 V, 190 mA @ 24 V
NPort® 5450I/5450I-T: 554 mA @ 12 V, 294 mA @ 24 V

Regulatory Approvals

EMC: CE (EN55022 and EN55024 Class A), FCC Part 15 Subpart B Class A
Safety: UL (UL60950-1), TÜV (EN60950-1)
Marine: DNV (standard temp. models only)
Medical: EN60601-1-2 Class B, EN55011

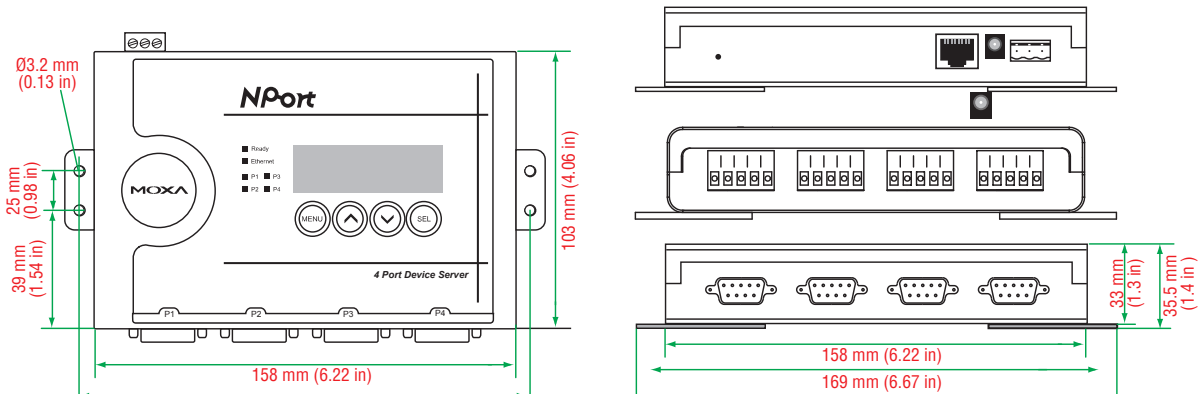
Reliability

Alert Tools: Built-in buzzer and RTC (real-time clock)
Automatic Reboot Trigger: Built-in WDT (watchdog timer)
MTBF (meantime between failures):
NPort® 5410: 205153 hrs
NPort® 5430: 201699 hrs
NPort® 5430I: 114540 hrs
NPort® 5450/5450I: 206903 hrs
NPort® 5450-T/5450I-T: 206903 hrs

Warranty

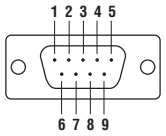
Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions



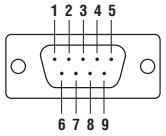
Pin Assignment

NPort® 5410
(RS-232, DB9 male connector)



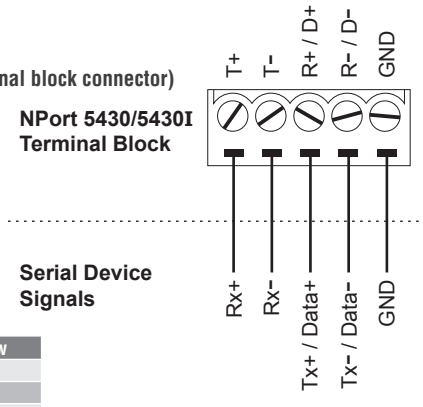
PIN	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	–

NPort® 5450/5450I/5450-T/5450I-T
(RS-232/422/485, DB9 male connector)



PIN	RS-232	RS-422/RS-485-4w	RS-485-2w
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–

NPort® 5430/5430I
(RS-422/485, terminal block connector)



Ordering Information

Available Models

NPort® 5410: 4-port RS-232 device server
NPort® 5430: 4-port RS-422/485 device server
NPort® 5430I: 4-port RS-422/485 device server with 2 KV isolation protection
NPort® 5450: 4-port RS-232/422/485 device server
NPort® 5450I: 4-port RS-232/422/485 device server with 2 KV isolation protection
NPort® 5450-T: 4-port RS-232/422/485 device server, -40 to 75°C operating temperature (without LCM)
NPort® 5450I-T: 4-port RS-232/422/485 device server with 2KV isolation protection, -40 to 75°C operating temperature (without LCM)

Package Checklist

- NPort® 5400 series device server
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

Optional Accessories (can be purchased separately)

DK-35A: Mounting Kit for 35-mm DIN-Rail
DIN-Rail Power Supply: See page A-8 for details
Terminal Block: See page A-7 for details
Power Adaptor: See page A-9 for details

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